

Ouachita Baptist University

## Scholarly Commons @ Ouachita

---

Honors Theses

Carl Goodson Honors Program

---

4-20-2022

### Teaching Music in the Age of Zoom: How to Run a Multimedia Piano Studio

Anna Grace Leicht

Follow this and additional works at: [https://scholarlycommons.obu.edu/honors\\_theses](https://scholarlycommons.obu.edu/honors_theses)



Part of the [Educational Technology Commons](#), and the [Music Education Commons](#)

---

Teaching Music in the Age of Zoom: How to Run a Multimedia Piano Studio

A Thesis by Anna Leicht

## Introduction

Picture this: you're a music educator from the past whose career has been completely unaffected by modern digital technology. You step into the year 2020, wondering what technological wonders this distant time in the future could hold for your field. In observing lessons, you marvel at the resources available at the fingertips of teachers. You are amazed by the ability to instantly connect with someone over a screen and teach them anything they need to know, to be able to view performances of any of the great musicians of the past, and to use digital pianos, microphones, and other technology to enhance the experience of the student. Yet you notice something odd about these teachers and their students. The teachers are disorganized and unable to communicate the most basic musical elements. The students are confused, distracted and uninterested. You go away disappointed, seeing revolutionary technology being unused or not used to its fullest potential.

Teaching online during the fall semester of 2020 brought about many challenges for educators. I began my first semester of teaching one elementary student weekly online lessons. During the first few weeks, I found myself overwhelmed. I didn't know how I could possibly help my student improve when at some points during the video conference, I could barely see or hear her playing. The signal would cut out and I would have no idea what she had played. The audio was choppy and the video was grainy. I didn't know how to structure my lessons to get the most out of the online format. I had no idea what resources were available through the internet. When most of your time is spent troubleshooting the internet connection, it is hard to thrive as a teacher or a student.

Does this situation sound familiar? Many educators struggled to adapt to the challenges of teaching remotely during the COVID-19 pandemic. The goal of this thesis is to explore online

teaching, and the steps necessary to set up a completely remote studio. A secondary goal is to provide a solid foundation on the communications and marketing side of setting up a home business.

After reading this thesis, music educators should feel more equipped to teach during a pandemic. By using the findings in this paper, teachers should feel confident enough to explore teaching online even when it is merely an option, not a necessity, and understand the wealth of online resources and technology at their disposal. They should also be able to meet the expectations of any time-traveling guest.

## Chapter 1: The Covid-19 Dilemma

The spring semester of 2020 had been grueling so far, and students were excitedly waiting for Spring Break to arrive. However, as the anticipated week drew closer, concerns about current events penetrated Ouachita's normally placid bubble. Students and professors began talking about the new, extremely contagious disease that was spreading rapidly in China. Suddenly, this disease was here. Students began hypothesizing on what would happen if it came to our small campus. Professors tried to carry on as normal, but it was evident that they were concerned as well.

On March 31, 2020, I heard rumors of a mysterious email scheduled to go out to the entire Ouachita campus at 2:00 PM. Knowing that something was brewing, I made my way to the Student Center to observe my peers and watch this historic moment. The Center was packed and bustling with excitement. By the time the email was sent out, most students already seemed to know what was coming.

The email detailed the unusual nature of the situation. Ouachita students were to return to their homes for spring break, and probably stay for an extra week. Students never returned to campus during the Spring 2020 semester. Little did we know how Covid-19 would affect the rest of our lives. Teaching became remote. Professors struggled to move their courses online, and many say that the engagement their students had during the remote learning period dropped significantly. In fact, in a summer 2020 survey of over 7,000 teachers, these teachers reported that only 60% of their students were engaged in distance learning.<sup>1</sup> The phrase "in these unprecedented times" would become the standard opener of emails and advertisements.

---

<sup>1</sup> Matthew A. Kraft and Nicole S. Simon, "Teachers' Experiences Working from Home during the COVID-19 Pandemic," UPBEAT (Teach Upbeat, 2020), [https://f.hubspotusercontent20.net/hubfs/2914128/Upbeat%20Memo\\_Teaching\\_From\\_Home\\_Survey\\_June\\_24\\_2020.pdf](https://f.hubspotusercontent20.net/hubfs/2914128/Upbeat%20Memo_Teaching_From_Home_Survey_June_24_2020.pdf).

## Helpful Figures

How do educators, and students, prepare for “unprecedented times?” There are a few pioneers in the field of online education whose contributions have been helpful to music educators during the pandemic. One such man, Dr. João Paulo Casarotti, has been developing his online piano studio since 2009, an entire decade early to the game. Dr. Casarotti is an assistant professor of piano at Southern University in Baton Rouge, Louisiana, and in addition to being a performer and pedagogue, Dr. Casarotti has developed an extensive online learning program, making him one of the most well-regarded online piano educators in the United States.

I was given the opportunity to sit in on an online piano pedagogy class at the University of Southern Mississippi with Dr. Casarotti. When watching this class, I noticed how clean his appearance was. Even though my Wi-Fi was unreliable, his appearance was very detailed, with good lighting and even his logo in the corner. His set-up was incredibly high-tech. He had a large podcasting microphone placed in the corner of the screen. He listened to the audio through Apple AirPods. I was impressed by his presentation because it is obvious that he not only can communicate ideas about online teaching and technology to educators, but can implement these concepts himself.

Mario Ajero, a professor at Stephen F. Austin State University in Nacogdoches, Texas, is another key figure in the world of multimedia piano pedagogy. His YouTube channel contains a plethora of teaching tips, tutorials, and videos of student performances.<sup>2</sup> His articles and lecture series have been used as a source by others in publications such as *Piano Magazine*.

Carly Walton is the founder of Teach Piano Online, which offers both a weekly podcast and a marketing class for piano teachers.<sup>3</sup> On her podcast, she interviews professionals in the

---

<sup>2</sup> Mario Ajero, “Mario Ajero,” YouTube (YouTube, 2021), <https://www.youtube.com/user/mariocast>.

<sup>3</sup> Carly Walton, “How I Became a Traveling Online Piano Teacher,” Teach Music Online, 2021, <https://www.teachmusic.online/about>.

fields of pedagogy and music technology. She also offers an online support group for music educators worldwide. Her podcasts feature other key players in the music and technology world.

Learning from the input of the most influential professionals in the online education field is helpful, but so is listening to the experience of teachers who had to figure out almost overnight how they were going to manage undesirable teaching conditions after lockdowns. In my research for this work, I interviewed two music professors on their experience teaching online. The first, John Briggs, taught voice at Ouachita Baptist University for many years, and is currently working towards completing his doctorate at Westminster Choir College. Mr. Briggs has been working on his doctorate through their online program, and had helpful input from a student's perspective. He noted that when he started his online degree at Westminster in 2016, it was one of the first graduate music programs to be fully online. "I had a lot of experience with what I felt like a student needed, and I think that helped me a lot because I had experience with the other side of the fence," he said. While talking about the impact of the 2020 Covid-19 lockdowns on music education, Mr. Briggs said, "For a large part, we as educators dove in and accepted it. We tried to make the most of it. I think [online teaching] is here to stay." Mr. Briggs has invested time and money into an online studio with that mindset.

Another interviewee, Dr. Tad Hardin, probably represents the reluctance of many piano educators to embrace online teaching. He is currently a piano professor at Liberty University, as well as a worship pastor. He teaches chamber music and worship classes at the university. He said he taught several courses online before Covid-19 and was familiar with online grading systems, but hadn't taught private lessons. "When I first started teaching online, one of my challenges was 'what do the students need to see from me' on my end," Dr. Hardin said. "When my colleagues taught voice or clarinet, it was pretty straightforward: they could be in the camera

with themselves and their instrument all in one view. But for piano, that's a lot different." He said he was not a fan of online teaching because of the interruptions experienced on the video conferencing platforms. "I couldn't hear all of the musical nuance...hearing the piece in person was so night and day." To combat this, Dr. Hardin would reduce the time spent in lesson performances and instead asked for YouTube recordings of the student's piece. He has since kept the recordings as a weekly goal for some students, even after returning to in-person lessons.

The practical advice and transparency that these professors gave me on their experience teaching online was equally as beneficial as the podcasts, blog posts, and E-Books of the key figures mentioned previously. Using simple solutions, like instructing the students to make and send recordings during the week, is sometimes just as powerful as using the high-tech resources of Dr. Casarotti or Carly Walton. When "unprecedented times" occur and disrupt the routine of education, teachers can feel isolated, inadequate, and overwhelmed. However, even if another global disruption leaves the majority of the world's population locked inside their homes, feeling isolated shouldn't be a concern because of the abundance of teachers who have gone through the same thing. Overwhelmed feelings should lessen as a result of research into the technology and resources at the fingertips of those who will take the time to read a few articles. Though it may not be the favored way of learning and teaching for everyone, online teaching should be considered a legitimate way to teach, whether in preceded or unprecedented times.



## Chapter 2: Why Teach Online?

Besides Covid-19, there are many reasons why educators are moving towards online platforms, and many good points that can be argued for the inefficiency of that cause. This section takes a look at a few of the most cited arguments for and against online teaching. Many on the list come from an August 2021 podcast by Carly Walton, entitled “Website Essentials for Recruiting Quality Students with Mellisa Weinert.”<sup>4</sup>

### Reasons to Consider Teaching Online

- **Location:** teachers who are able to facilitate online learning can teach students from literally anywhere around the world. Mellisa Weinert, guest on the Teaching Music Online Podcast, hopes to move her studio 100% online so that she can move back to her family farm in South Dakota. Flexibility of location is a huge benefit, especially to teachers who live in a smaller community. It is also a benefit to teachers who find themselves charging much lower tuition as a result of an undesirable local economy, because they can supplement with students who are willing to pay more. Relocating to another state isn’t a big issue when the teacher’s students are all online. Moving home to aid aging parents is feasible when a teacher isn’t leaving behind a studio of twenty students.

Having a lifestyle of travel is also on the table when students can be taught virtually, from anywhere in the world with a reliable internet connection. Carly Walton describes her experiences traveling while teaching on her website:

“In 2017 my husband Mike and I took off on a trip around the world with our daughter Whitney! Now, 3 years later we’ve visited 17 countries and

---

<sup>4</sup> Carly Walton, “E51: Website Essentials for Recruiting Quality Students with Mellisa Weinert,” Spotify (Teach Music Online, August 16, 2021), <https://open.spotify.com/episode/5tvGguaATv1iMxbqLAhcrN?si=0btksmGQx6IvQCkjb2wcQ>.

added darling Mara, our second daughter, to the crew. In each country we visited I taught my online piano students, hosted online recitals, and marketed my studio to students around the globe.”<sup>5</sup>

- **Pandemic-proof:** In the case of more Covid-19 lockdowns, or other circumstances where most people will need to seek shelter in their homes, online teaching is a way to continue education for students, and a source of income for teachers.
- **Access to media:** It is easier to use nontraditional media as lesson enhancement; YouTube videos, video games, and other online resources are very easy to incorporate into lessons.
- **Financial Savings:** According to Weinert, before she moved her studio online,  $\frac{1}{3}$  of her tuition fees were going towards rental fees.<sup>6</sup> This is the reality for many educators who work in an environment outside their home: studios, office spaces, or spaces in a music academy have high rental fees.

Teachers that travel to their students also face considerable financial savings when considering the gas money, mileage, tolls, and time spent commuting from student to student. This is one area where teachers can reduce their overhead costs, especially in large metroplexes where students and teachers may live thirty minutes or more apart.

- **Students in busy families can take lessons.** Large families often have many time commitments throughout the week, and loading up the kids in the minivan to

---

<sup>5</sup> Carly Walton, “How I Became a Traveling Online Piano Teacher,” Teach Music Online, 2021, <https://www.teachmusic.online/about>.

<sup>6</sup> Carly Walton, “E51: Website Essentials for Recruiting Quality Students with Mellisa Weinert,” Spotify (Teach Music Online, August 16, 2021), <https://open.spotify.com/episode/5tvGguaATv1iMxbqLAhcrN?si=0btksmGQx6IvQCkjb2wcQ>.

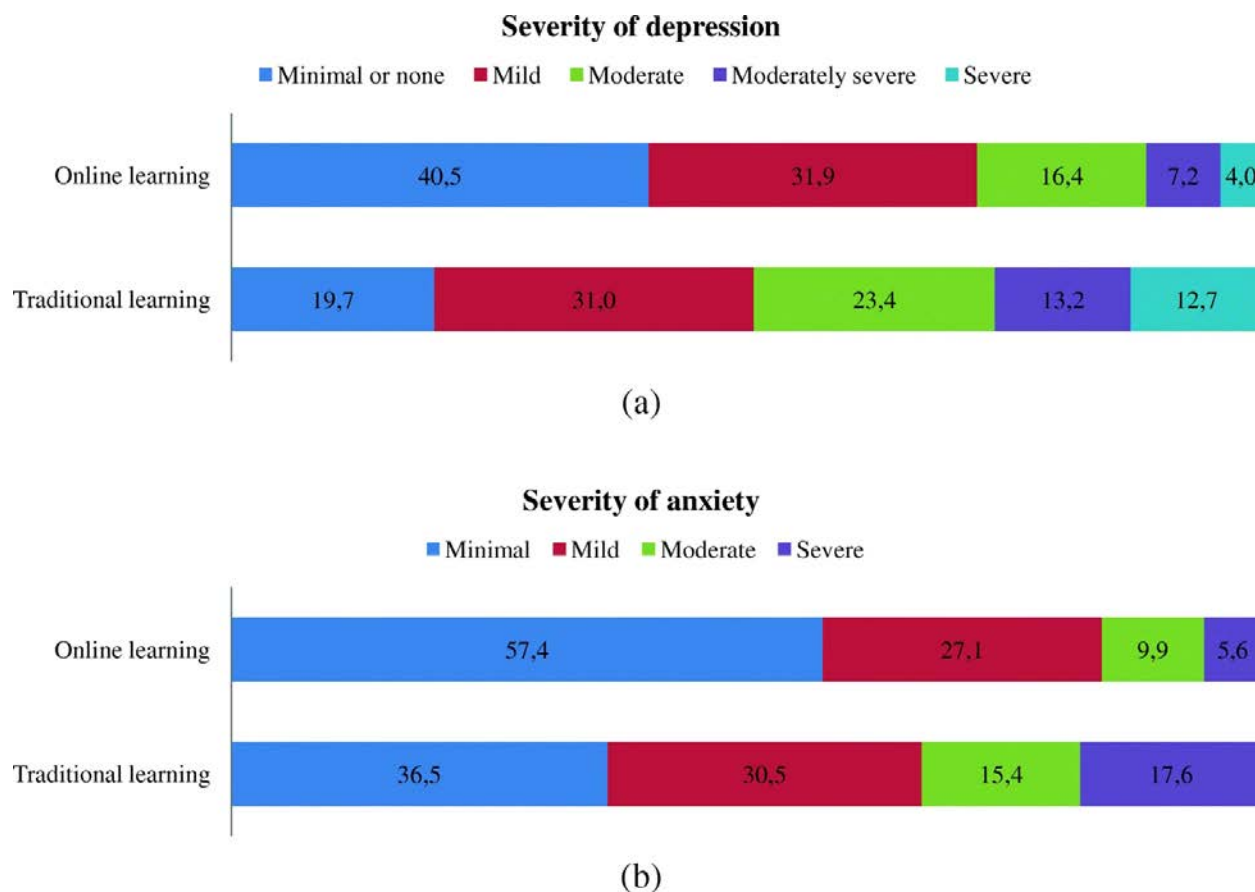
drive to piano lessons every week may not be a time commitment that parents can add to their schedule. Teaching online allows for the student to be independent in attending their lesson.<sup>7</sup>

- **Access for all students:** Students facing mental health struggles such as anxiety and depression may find online lessons a more accessible medium than physically going to a teacher's house. Studies of medical students at the Astana Medical University showed that the rates of anxiety and depression in online learning were similar to those in traditional learning situations, and despite popular opinion and conflicting articles (discussed in the next section), the study shows that rates of anxiety and depression actually decreased after the transition to online learning (see Fig. 1).<sup>8</sup>

---

<sup>7</sup> Diana Dumlavwalla, "Characteristics of Expert Teachers Using the Video-Conferencing Platform," *Piano Magazine*, 2020.

<sup>8</sup> Aidos K. Bolatov et al., "Online-Learning Due to COVID-19 Improved Mental Health among Medical Students," *Medical Science Educator* 31, no. 1 (2020): pp. 183-192, <https://doi.org/10.1007/s40670-020-01165-y>.



*Fig. 1: Study of depression and anxiety rates among Kazak medical students*

#### Reasons Against Teaching Online

- **Technique Issues:** Students' technique may suffer if adequate preparation is not done to handle this aspect of teaching online.
- **Student Distraction:** Students can more easily be distracted in a familiar environment such as their homes. Many parents would say that their children are too easily distracted by technology, though conclusions among researchers about the true nature of technological distraction are mixed. Alexander J. Dontre notes that because of a lack of consensus in studies on the effect of cellphones on academic performance, "it is reasonable to suggest that digital devices are not all bad or all good; they are merely tools that may benefit students or interfere with

learning, depending on how they are used.”<sup>9</sup> While scholars continue to debate the subject, one way to combat distraction is to involve parents. Make sure the parents know that lessons are to be a phone-free zone, and help them understand the need for a quiet environment for lessons.

- **Investment in equipment:** Equipment can be expensive. Even the most basic set-up will require an investment of some sort. Getting a return on the investment for microphones, audio processors, and cameras can take months of teaching, especially if the teacher has only a few students.
- **Mental health detriments:** According to research by the IDRA (Intercultural Development Research Association), mental health struggles during the pandemic impacted student engagement. In a survey funded by Seek Common Ground, 75% of high school upperclassmen and undergraduate lowerclassmen experienced mental health struggles during the pandemic.<sup>10</sup> Whether or not online learning is a feasible option depends on the temperament and struggles of the student.

“Zoom fatigue,” coined by Jeremy Bailenson,<sup>11</sup> is a phenomenon researched extensively by Stanford researchers. It refers to the exhaustion that is a consequence of extended video conferencing. An article in the Stanford News identifies four reasons why Zoom fatigue is an issue: 1) prolonged intense eye contact with other attendees, 2) being exposed to a real-time video of yourself for a long period of time, 3) the reduction of natural, conversation mobility, and 4)

---

<sup>9</sup> Alexander J. Dontre, “The Influence of Technology on Academic Distraction: A Review,” *Human Behavior and Emerging Technologies* 3, no. 3 (2020): pp. 379-390, <https://doi.org/10.1002/hbe2.229>.

<sup>10</sup> Christina Muñoz, “Mental Health Implications of Virtual Learning on Student Engagement,” IDRA, August 30, 2021, <https://www.idra.org/resource-center/mental-health-implications-of-virtual-learning-on-student-engagement/>.

<sup>11</sup> Vignesh Ramachandran, “Four Causes for 'Zoom Fatigue' and Their Solutions,” Stanford News (Stanford University), March 1, 2021), <https://news.stanford.edu/2021/02/23/four-causes-zoom-fatigue-solutions/>.

the increased cognitive load when video conferencing.<sup>12</sup> Students and teachers alike may face Zoom exhaustion.

- **Emotional connection:** Student-teacher connection through an online platform can be more difficult than connecting in-person. “It’s important for a teacher to take the time and ask questions, to ascertain a student’s mood,” says Mr. John Briggs. “It’s an important thing to add to an online lesson that you might not do if you were in person.”

The pros and cons for online teaching must be weighed by both the student and teacher. For some it is a very convenient and attractive option. Other teachers may be vehemently opposed to this style of teaching. Even if the pros and cons are weighed and teachers decide against teaching online, it is still vital to understand technological trends in the music industry.

### Chapter 3: Getting Started

Ultimately, anyone can use a laptop with Wi-Fi connection to teach piano online, without any of the technology discussed in this section. However, it is important to realize that a primitive setup, like using only a laptop with Zoom, will have limitations. This section will cover the necessary equipment for setting up an online studio, including computers, Wi-Fi, microphones, secondary cameras, lighting, live-streaming software, and other options for enhancing the student’s experience. It will also cover lesson-planning and ideal formats for online lessons.

---

<sup>12</sup> Ramachandran, “Four Causes for 'Zoom Fatigue' and Their Solutions,” 2021.

## A. Live-Streaming Platforms

### 1. Zoom

Since March 2020, Zoom has been the video conferencing platform of choice for many educators. Its rise out of anonymity was due in large part to the many universities and schools who turned to the platform when students were sent home due to Covid-19 concerns. However, the company has been around since 2011.<sup>13</sup> The improvements to Zoom's usability since the Covid-19 lockdowns have been astonishing. "Initially there was the big issue of two people who couldn't talk online," John Briggs said, "but that's all been worked through." According to Mr. Briggs, latency in Zoom is a huge issue, especially for voice studios. His solution to this problem is switching to another platform: CleanFeed.

### 2. CleanFeed

CleanFeed is a sophisticated audio-transmission platform. According to their website, CleanFeed is the "online studio for live audio and sound."<sup>14</sup> CleanFeed is used by media conglomerates such as BBC, Discovery, Warner Brothers, and NBCUniversal. There is a free version of Cleanfeed, but a downside is that to get the full features, such as the ability to use multiple input devices, control over the channel mix, and aux outputs, you will need to upgrade to the Pro version, which is a costly investment at \$34 a month, or \$22/a month for the discounted version (for personal use or making under \$10,000 a year).

### 3. Microsoft Teams

Microsoft Teams is the primary way that Liberty University facilitates distance learning. However, according to piano professor Dr. Hardin, professors at Liberty use Zoom with enhanced audio settings for private lessons, because they have found that Microsoft Teams

---

<sup>13</sup> "Video Conferencing, Web Conferencing, Webinars, Screen Sharing," Zoom, December 8, 2021, <https://explore.zoom.us/en/about/>.

<sup>14</sup> "Cleanfeed," Cleanfeed, 2021, <https://cleanfeed.net/>.

doesn't work as well for that purpose. Microsoft Teams has a free and premium version, but piano teachers, as small businesses, will probably only need the free version.<sup>15</sup>

#### 4. Skype

Skype was launched in 2002, and as a result is one of the oldest video conferencing platforms. It was originally owned by eBay but eventually was acquired by Microsoft. Skype is another good alternative to Zoom, and users can record their calls and use many functions similar to Zoom. Some problems that I have encountered when using Skype with my MacBook Air is that within minutes of launching the application, the computer fan will turn on, which is problematic if using the internal microphone for speaking.

#### 5. Facetime

For Apple users, Facetime is a simple, built-in way to connect with others over video chat. Facetime is meant primarily for iPhone, and its desktop version is rudimentary.<sup>16</sup> Facetime, unlike the other platforms mentioned, has very few settings. As a result, it is probably not the best choice for online lessons.

#### 6. Google Meet

Google Meet is Google's answer to Zoom. The two are very similar, as both were created with the intent of being used for business meetings. One feature of Google Meet is that it allows for presentations through Slides.<sup>17</sup> Google Meet doesn't allow for recording of meetings unless the user is paying a premium.

---

<sup>15</sup> Joel Khalili, "What Is Microsoft Teams? How It Works, Tips and Tricks, and Best Features," TechRadar (TechRadar pro, November 5, 2021),

<https://www.techradar.com/news/what-is-microsoft-teams-how-it-works-tips-and-tricks-and-best-alternatives>.

<sup>16</sup> Lora Ivanova, "FaceTime vs Skype: The Ultimate Video Calling App Battle," BROSIX, September 26, 2021, <https://www.brosix.com/blog/facetime-vs-skype/>.

<sup>17</sup> Christian de Looper and Ben Blanchet, "Google Meet vs. Zoom: Here's How the Popular Video Conferencing Tools Stack Up," Business Insider (Business Insider, July 8, 2021), <https://www.businessinsider.com/guides/tech/google-meet-vs-zoom>.



## B. Wi-Fi and Wired Connections

When setting up an online studio, it is necessary to consider Wi-Fi. Wireless versus a wired connection can have a big impact on the effectiveness of lessons. According to Cisco, a wireless connection “allows devices to stay connected to the network but roam untethered to any wires.”<sup>18</sup> The advantage of a wireless connection is it is what most people normally use in their homes, and its untethered nature allows for more mobility. A wired connection must have some sort of cable connecting the device to an Ethernet port. He recommends using a wired connection, using a Category 6 ethernet cable and RJ45 connector. He also recommends making sure that only the necessary programs are running on the computer to help with speed.

“A lot depends on reliable internet connections on both ends,” says Dr. Hardin. Even if the teacher has a reliable internet connection, there will be disruptions if the student has an unreliable internet connection. “Every connection is going to be different...that’s probably the hardest part,” says Mr. Briggs.

## C. Cameras, Lighting, Microphones

In any online studio, considering the way that the student perceives the teacher is paramount to their success in learning. If the image is dark or the audio jumbled, the student’s learning experience will suffer. Investing time and money in student experience will help the teacher to use online learning to its fullest potential. Microphones and cameras don’t have to be overwhelming. “While more tools can be very resourceful and helpful for students, a simple yet effective setup is your main device such as a laptop or tablet, along with an external microphone and headphones,” says Rebecca Bellelo in an article entitled “Keeping a Studio Running Effectively” published in the Special Covid-19 edition of *Piano Magazine*. “You can always add

---

<sup>18</sup> “What Is a Wireless Network? - Wired vs Wireless,” Cisco (Cisco, July 1, 2021), <https://www.cisco.com/c/en/us/solutions/small-business/resource-center/networking/wireless-network.html#~:introduction>.

on to your setup as you go, but do not let the technology overwhelm your teaching. Your solid teaching methodology is the most effective tool in your toolkit right now, no matter how many camera angles you have.”<sup>19</sup>



*Fig. 2: The Zoom H4N Digital Audio Recorder*

Beginning with microphones, Mr. Briggs says that teachers want to use mics with zero gain. “Every microphone comes with a chart that shows what it boosts and doesn’t. Some boost low, some boost to the middle for speaking...but you want a zero gain.” Zero-gain microphones can be expensive, but are worth it for the teacher who demonstrates in the lesson. “That’s something the teacher is going to have to consider - how important is it that you get the mix that

---

<sup>19</sup> Rebecca Bellelo, “Keeping a Studio Running Effectively,” *Piano Magazine*, 2020, pp. 10-11.

you want to go to the student,” says Mr. Briggs. According to Dr. Casarotti, the Samsom Meteorite, Shure MV51 Microphone Condenser, the Blue Snowball, and the Zoom H4N Digital Audio Recorder are all viable options.

Considering lighting and background is also necessary. According to Mr. Briggs, the less information that a computer needs to transmit, the faster the connection will be. Keeping a plain, solid-print shirt and a simple background is one way to reduce lag and distortion. Being well-lit from the front also ensures the student will be able to see the teacher. Facing a window or placing a lamp next to the computer are simple ways to create good lighting.

The type of cameras used may not matter quite as much as the angles at which they are placed, both for student and teacher. “Don’t be afraid to “play director” with your students to get the camera angles and audio settings that you’re going to need,” says David Cartledge in the Special Covid-19 issue of *Piano Magazine*, in an article entitled “Teaching Via Video: How to Still Be You!” Cartledge describes five main angles to work with in lessons: 1) an above view of the hands and keyboard, 2) a view from the side, 3) a view to show the feet and pedals, staff paper or perhaps a digital screen to explain theory, and 5) a view to show props, like a model of the action of a piano.



*Fig. 3: Screenshot of a popular YouTuber who uses an above view*

Dr. Casarotti has a few cameras that he recommends. The Logitech C920 is one of his favorites, but during COVID-19 lockdowns it doubled in price. On the official Logitech website, this camera is now listed at \$69.99, making it an intermediately-priced option.<sup>20</sup> Dr. Casarotti uses the Aoboco Webcam for the scene of his face, as it contains a ring light mounted on the camera. However, this camera is unavailable at major retailers and more expensive than he mentioned.

A few smartphone apps exist that allow the phone to function as a webcam. The NDI app is one of these. DSLR cameras are another option, especially if the teacher already has access to one. However, DSLR cameras, especially professional-grade, are probably the most expensive option.

<sup>20</sup> “Logitech C920s Pro Full HD Webcam with Privacy Shutter,” with Privacy Shutter, 2021, <https://www.logitech.com/en-us/products/webcams/c920s-pro-hd-webcam.960-001257.html>.

Connecting your computer or smartphone to a larger screen allows for a better view of the student. This can be done through an HDMI cable to a TV, which many people already have. “There are cables out there for \$15 dollars that you can purchase to connect your iPhone to a bigger screen,” Dr. Casarotti said in his presentation of online teaching. Dr. Casarotti also sometimes uses an HD projector as a larger monitor.

Using cameras, good lighting, and a good microphone won’t guarantee the teacher success in online education. These elements, however, do make a difference. Ample research should be put into the technology that you will probably use every day as an online teacher.

#### D. Interfaces, Switchers, and Scenes

An audio processor is necessary for the microphone. Using both the video and audio in Zoom or an equivalent program can compromise the speed of the connection, so Mr. Briggs recommends mixing outside of the platform. Doing this in an external processor will allow the computer to focus on speed. Some microphones, such as the Shure, also function as audio interfaces.

To hear the student, headphones or speakers may function better than the computer’s own speakers. Dr. Casarotti himself uses Apple AirPods Pro, but he also recommends the Bose Soundlink Mini Speaker or a soundbar with a subwoofer. Using transparency mode with AirPods allows for the teacher to hear themselves speaking and playing piano. With a speaker, teachers may encounter feedback as the microphones can easily pick up the speaker’s audio. Audio out is notably unimportant to the student’s learning experience, but may make it easier for teachers to hear musical nuance.

Dr. Casarotti recommends using OBS Studio, a free software that allows switching through different online scenes and camera angles. Another option for both PC and Mac users is

Many Cam, but this software costs \$69 a year to connect two devices.<sup>21</sup> The advantage to OBS is that it is completely free and allows for building of unlimited scenes and input of multiple sources. OBS Studio also functions with all of the major video conferencing platforms. Dr. Casarotti shared his top 10 scenes he uses in his lessons. “It’s really important that in every scene, you put your face in it,” Dr. Casarotti says. “If you have two cameras, put one on your face, and the other on the side of the piano. If you have three cameras, put one on your face, one on the right, and one on the top.”



*Fig. 4: OBS Studio Scene*

Cameras, microphones, lighting, and audio interfaces are all crucial elements of an online studio. Making sure that the quality of video and audio is high should be a priority for every

<sup>21</sup> “Choose a Plan That's Right for You,” ManyCam (Visicom Media Inc., 2021), <https://manycam.com/buy/#individuals>.

teacher as they seek to foster customer satisfaction in their students and the parents of students. Receiving payment for mediocre services raises the question of good business practice and customer satisfaction, so significant effort should be put into this realm.

#### Chapter 4: Resources

Diving into piano pedagogy can be overwhelming, as the resources are virtually endless. How does a teacher discriminate between helpful and useless resources? This section will cover the teaching apps, online music libraries such as IMSLP and Scribd, method book libraries such as Faber Piano Adventures, and teaching games that can be used in teaching online. Appendix B also provides a chart comparing print books method books and their various features.

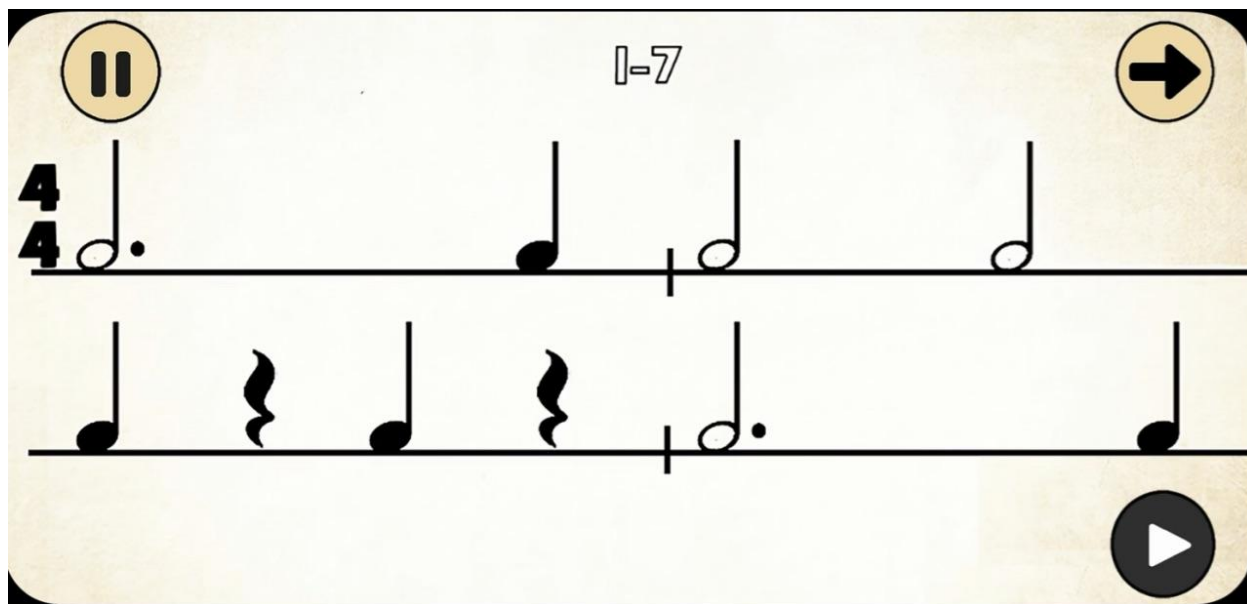
A new but increasingly popular resource for the online piano teacher is the Faber Piano Adventures Teaching Atlas.<sup>22</sup> The Atlas is the online resource bank of the Faber method books series. It contains all Faber products in ebook format for use by teachers and teacher groups. Teachers looking to see exactly what their student will see during the lesson may find this a useful resource. Another facet of the Atlas is its embedded accompaniment tracks, allowing the teacher to accompany the student even when being physically separated. The Atlas also contains annotation tools, which can be used to highlight specific mistakes or problem areas in the music as the student is playing. The Atlas is \$9.99 a month, or \$88 a year. This does add to overhead costs, and is something to take into consideration as a teacher gets their online studio off the ground. However, the convenience may be worth it, considering that Faber is one of the top method book choices among private piano educators. The Atlas also has another payment option through groups such as local MTNA chapters or music schools.

---

<sup>22</sup> “Piano Adventures Teacher Atlas,” Faber Piano Adventures Digital Cloud (Hal Leonard, 2021), <https://cloud.pianoadventures.com/products/teacher-atlas/>.

“The original purpose of the Teacher’s Atlas was to view your students’ books even while teaching remotely,” Landon Baumgard, the outreach manager for Piano Adventures, said in an introductory webinar on the site.<sup>23</sup> The Atlas was developed during the COVID-19 pandemic to fix this problem of physical separation, as many teachers didn’t actually have a home copy of the Faber books. The Atlas, combined with the student’s own physical copies of the Faber books, provides a useful primary curriculum.

Using teaching apps can help students learn theory, sight reading, and aural skills. Choosing the right app for the student’s needs, however, can be overwhelming. Dr. Casarotti incorporates many teaching apps into his lessons, and assigns students to use them during the week as well. Two apps that he uses for theory and aural skills are Theory and Tenuto.



*Fig. 5: An example from Rhythm Cat*

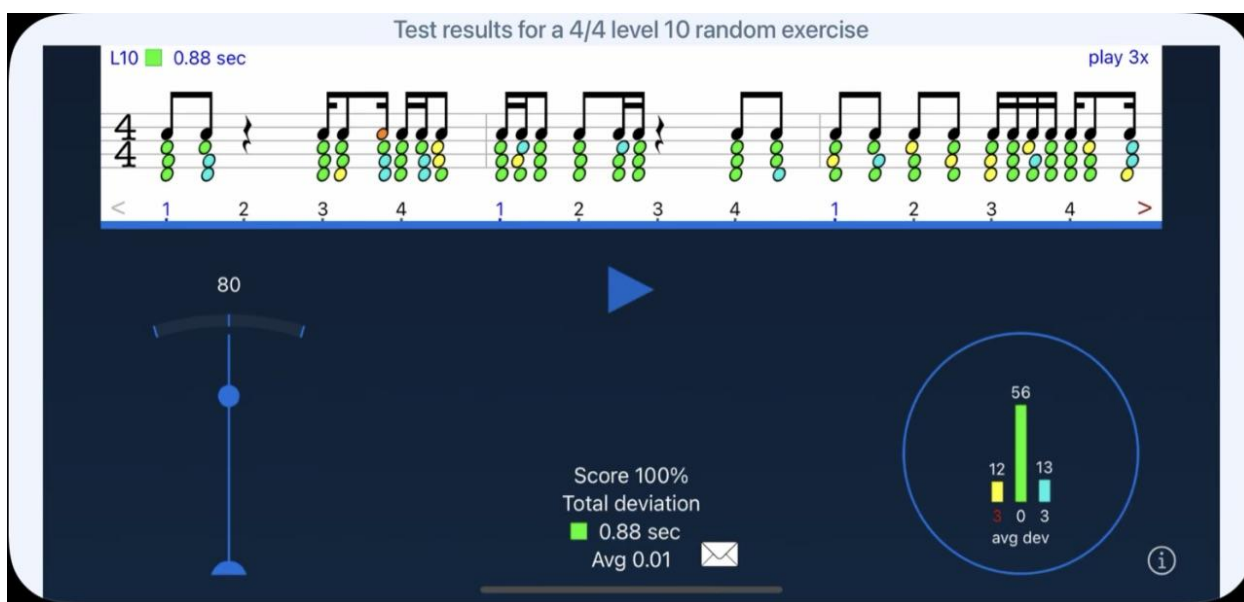
The Theory app has lessons on chords, rests, measures, steps, rhythms, scales, and more. The app has clean visuals and simplistic teaching. It can be combined with Tenuto, an app for

<sup>23</sup> Landon Baumgard, “Getting Started with the Teacher Atlas,” Faber Piano Adventures (Hal Leonard, July 15, 2021), <https://pianoadventures.com/events/getting-started-with-the-teacher-atlas/>.



exercises. These exercises are customizable. Tenuto contains ear training exercises, where students hear notes and have to play each note back.

Multiple high-quality apps exist to help students practice rhythm. Rhythm Swing is an app for practicing rhythm with a video game format. According to Dr. Casarotti, kids love this app, because students have to get the exercises right to advance in the game. The app doesn't have advanced rhythms but instead is meant for beginners. Rhythm Cat is another cumulative app that teaches beginners increasingly complex rhythms. Dr. Casarotti also mentioned that My Little Rhythm is another good option. All of these apps can and should be tested by the teacher before they assign their students to use them.



*Fig. 6: Rhythm Sight Reading Training*

Dr. Casarotti has several resources that he recommends especially for Intermediate and Advanced rhythm practice. The first of these is Rhythm Sight Reading Training, which costs \$3.99 on the Apple Store. According to the description, this app contains common and uncommon rhythms in many different time signatures, as well as the ability to practice swinging various rhythms. The reviews for the app are overwhelmingly positive.

An app for teaching that I have used in my own lessons is the Notes Teacher app, which is a very basic app that provides exercises where students can identify notes on a score. Like others, it is automatically graded, and students cannot proceed to the next level until they have mastered their current one. Even in traditional face-to-face lessons, I assigned students to work on the app during the week, and found it to be tremendously helpful to their note identification skills.

Other useful apps include Piano Marvel and Simply Piano by JoyTunes, which is reviewed extensively in Appendix A. Piano Marvel claims to teach piano four times faster than traditional methods. It offers assessment through a MIDI connection to a keyboard or digital piano.<sup>24</sup> Other features of Piano Marvel include yearly online competitions with prizes, printable music, and flashcards. Piano Marvel is created specifically to be used in conjunction with teachers. Tonara is a sheet music app that uses the phone's microphone to follow along with the performer, allowing them to perform without worry of page turns. It tracks practice and allows for connections between teachers and students.<sup>25</sup> Apps like Piano Marvel, Tonara, and SimplyPiano can be used as supplemental practice for the student should the parents be willing to pay a subscription.

The International Music Score Library Project / Petrucci Music Library (IMSLP) is another resource that all music educators should familiarize themselves with. IMSLP contains thousands of public domain scores and recordings.<sup>26</sup> For students that cannot afford an expensive edition of their Beethoven Sonata, IMSLP contains many different score options. IMSLP is also useful for screen sharing when teachers wish to mark up their student's music during the lesson.

---

<sup>24</sup> Giselle Sproule, "Piano Marvel Review: Best Platform to Learn Classical Piano?," PianoDreamers.com, December 18, 2020, <https://www.pianodreamers.com/piano-marvel-review/>.

<sup>25</sup> Valerie Ross, "Tonara Review: Six Weeks In," Music Con Brio Piano Lessons (Music Con Brio Piano Lessons, October 9, 2020), <https://www.musicconbriopiano.com/piano-lesson-blog/tonara-review-six-weeks-in>.

<sup>26</sup> "Main Page," IMSLP (MediaWiki, 2021), [https://imslp.org/wiki/Main\\_Page](https://imslp.org/wiki/Main_Page).

The competitor to IMSLP is Scribd, a subscription-based bank of everything from audiobooks and magazines to sheet music. However, a subscription is required, making it the more expensive option.

Online resources are not the only elements a teacher should consider when choosing curricula and supplements. Print books can be scanned and projected, depending on copyright laws. To help inform the decision of what method books to use, I have included a lengthy chart detailing the benefits and downfalls of each of the major method book series in the appendix of this document.

## Chapter 5: Administration

Many teachers don't take into account the amount of work that goes into paperwork and bookkeeping. Administration for a large studio could be a full-time job, and often performing arts schools employ someone to take care of the tedious work of scheduling, communication, and marketing so that teachers can focus more solely on their work. This section will cover social media marketing and ways to handle bookkeeping online.

### Principles of Advertising and Marketing from Malcom Gladwell<sup>27</sup>

In the world of music, networking determines everything. This is as true for music educators looking to gain students as it is for the performer looking for gigs. This section explores the ways musicians can promote themselves, especially online and through social media. It also touches on ways to use these platforms to the advantage of the educator and dives into the specific advantages of each platform. The first half of this section goes over some abstract concepts. These concepts are necessary before getting into the specifics of how to create a Facebook ad or set up a website, because without understanding the underlying message, your efforts will be vague and won't connect with your target audience.

---

<sup>27</sup> Malcolm Gladwell, *The Tipping Point* (New York, New York: Little, Brown, and Company, 2000).

## 1. Marketing Your Message

The first point of this section deals with developing your message. Malcom Gladwell's book *The Tipping Point* dives into the way in which messages spread quickly and seemingly randomly. He discusses the three kinds of people needed for the success of a message: connectors, mavens, and salesmen.<sup>28</sup> Connectors are people who know many people, or, as communication specialists would say, have many weak ties. Knowing and using these extraverted, ultra-connected people is a huge factor in marketing your studio. Therefore, the first point of marketing your studio is knowing the right people.

### 1a. Know the right people.

If you do a good job in teaching your students, hopefully you will already have the support of the most influential marketers: the parents. Parents are key in word-of-mouth communication. Much of this communication will be organic, as parents naturally love to brag about their children's hobbies. Word-of-mouth communication is one of the most important types of advertising, and more personal than any paid Facebook ad or tearable flyer on a bulletin board.<sup>29</sup> Social media is crucial for word-of-mouth marketing, as creating shareable Facebook and Instagram posts will give the opportunity for parents to repost your content, exposing all of their friends to your studio. Another way to find connectors is by joining a local teacher's association. This is a valuable asset for all aspects of music education, but it allows you to get connected with other educators in the area.

### 1b. Make your message sticky.

---

<sup>28</sup> Malcolm Gladwell, *The Tipping Point* (New York, New York: Little, Brown, and Company, 2000).

<sup>29</sup> Jacques Bughin and Jonathan Doogan, "A New Way to Measure Word-of-Mouth Marketing," McKinsey & Company (McKinsey & Company, February 5, 2018), <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-new-way-to-measure-word-of-mouth-marketing>.

Gladwell also talks about making messages sticky, which is further explored in the book “Made to Stick: Why Some Ideas Survive and Others Die” by Chip and Dan Heath.<sup>30</sup> In this case, your message is how amazing and revolutionary your online studio is. To make this message sticky, you can follow the SUCCEsS steps in Made to Stick: make your message a Simple, Unexpected, Concrete, Credentialed, Emotional Story. For the sake of this paper, we will focus only on the first three. Creating a simple message can be done through creating a very specific brand idea. Is your studio all about one-on-one teaching? Is it focused on the flexibility that online teaching provides? Make this brand idea the focus of all marketing and communication.

To demonstrate this point of finding the core message, the Heath brothers give the example of Southwest Airlines. Southwest is known as the budget airline, and every decision that they make uses this lens. “Herb Kelleher [the longest-serving CEO of Southwest] once told someone, ‘I can teach you the secret to running this airline in thirty seconds. This is it: We are THE low-fare airline. Once you understand that fact, you can make any decision about this company’s future as well as I can.’”<sup>31</sup> With this in mind, when a flight attendant suggests adding an entree on the flight from Houston to Las Vegas, the company can recognize that this choice isn’t in line with being “the low-fare airline.”

This story from the airline industry is applicable to music education. Reducing your message to its core idea is vital, therefore, and having a clear brand idea will make other decisions easier. An example in the spirit of the Heath brothers’ story can demonstrate this point: if the promise of your brand is being a budget-friendly option for learning piano, you may decide it is not in your studio’s best interest to purchase expensive new studio monitors.

---

<sup>30</sup> Chip Heath and Dan Heath, *Made to Stick: Why Some Ideas Survive and Others Die* (New York, New York: Random House, 2010), 253.

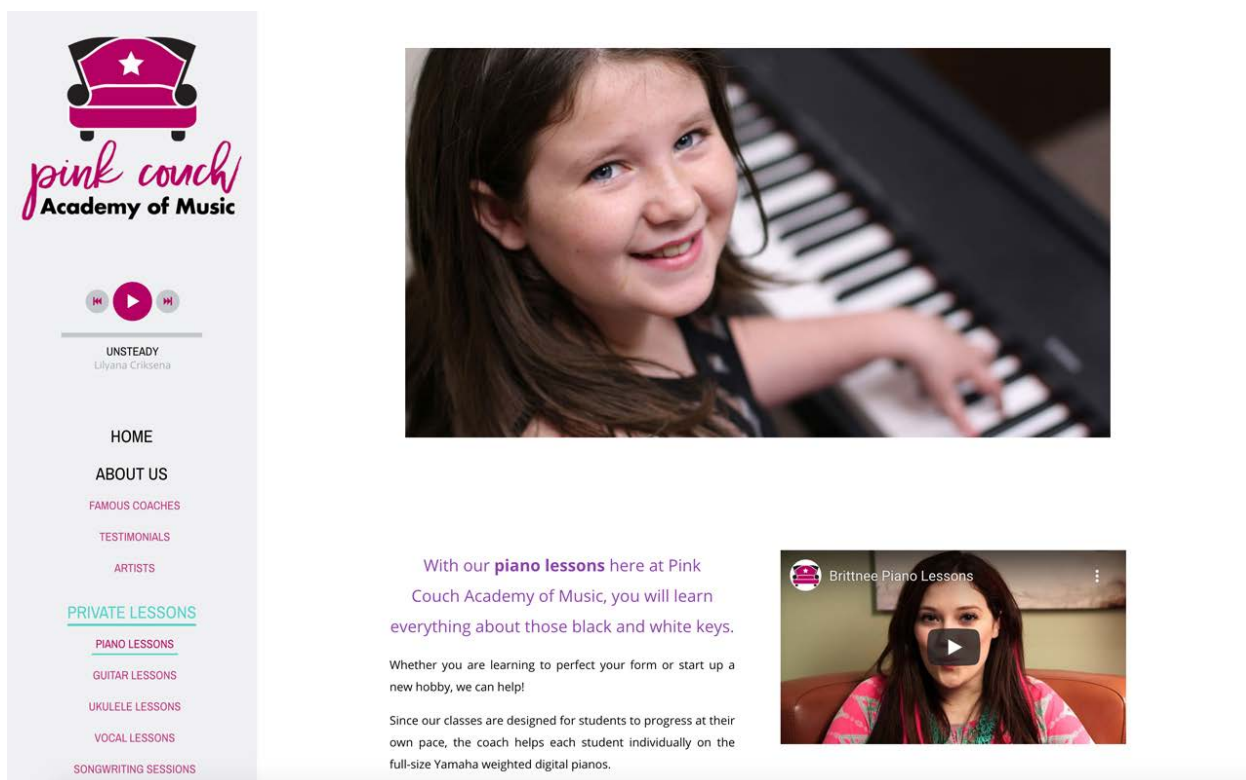
<sup>31</sup> *Ibid.*

## 2. Creating an online presence

Using the free networking tools of social media is one of the best ways to increase the visibility of your studio. Websites, YouTube accounts, and Facebook accounts are important for establishing a private studio's presence online. Creatively using newer platforms like TikTok can also spark interest in a teacher's services. The first step for every teacher, however, is to have a website.

### 2a. A Website

Websites are the most valuable online asset to a private studio. It may be the first impression a potential client has of your work. Websites can be as easy as creating a prefabricated Wix site, or as complex as can be imagined. A number of services allow for users to build their own site, including Wix, uKit, Squarespace, and Weebly. Weebly offers a free starter website kit, with upgrade options that include a custom domain name. Information that should be on the site include a welcome page that introduces the teacher's focus and studio, a bio page that informs clients of the teacher's background and qualification, and a contact form that allows clients to get in touch and request lessons. Other helpful items to include on a website are YouTube videos of student recitals, teacher recitals, or lessons. Including client testimonials can sway potential client opinion in the teacher's favor.



*Fig. 7: An example of a home page<sup>32</sup>*

Keeping the website updated is also necessary. Adjusting calendars and dates can make a huge difference in how customers perceive your professionalism, according to Mellisa Weinert on the Teaching Piano Online podcast.<sup>33</sup> In creating your website, it is helpful to remember the SUCCEsS steps. Keep it simple. Don't fill the page with superfluous information. Creating an attractive, easy-to-use website drastically improves your credibility as a teacher.

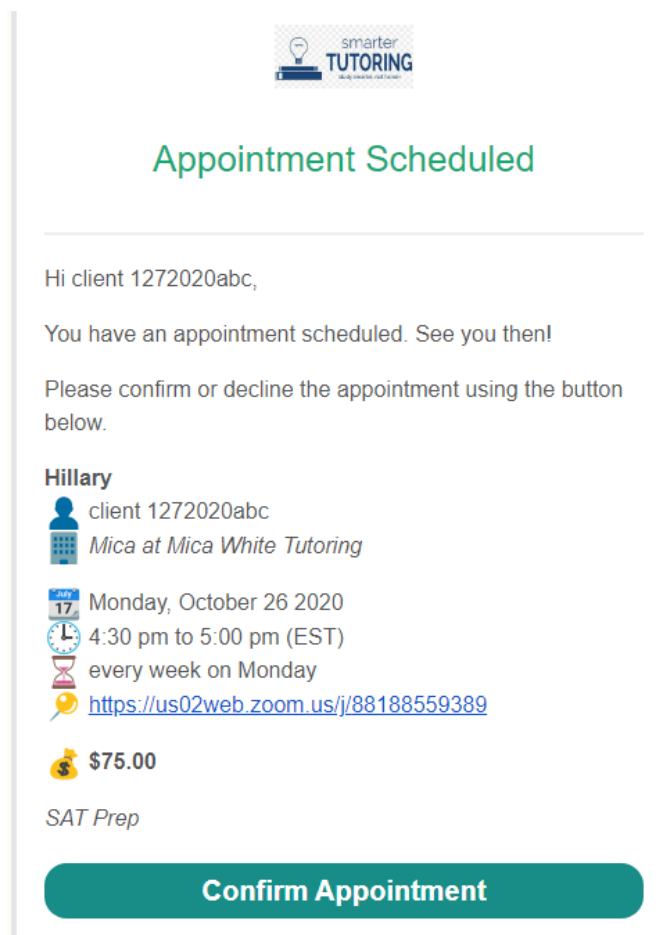
## 2b. Enrollment and Payment Processes

Implementing an automated scheduling and payment process will save teachers hours of their time spent creating invoices and Google Calendar Invites. One platform that facilitates this

<sup>32</sup> Melanie Kealey, "Website Design Inspiration: Best Piano Teacher Websites," Bandzoogole Blog (Bandzoogole, July 23, 2020), <https://bandzoogole.com/blog/website-design-inspiration-best-piano-teacher-websites>.

<sup>33</sup> Carly Walton, "E51: Website Essentials for Recruiting Quality Students with Mellisa Weinert," Spotify (Teach Music Online, August 16, 2021), <https://open.spotify.com/episode/5tvGguaATv1iMxbqLAhrN?si=0bttksmGQx6IvQCkjb2wcQ>.

is Fons, an online scheduling and billing system created by music teachers. According to Fons, the program strives to reduce the time spent in bookkeeping so teachers can focus on their



*Fig. 8: Appointment confirmation through Fons*

teaching. Fons does this through “eliminating invoicing, streamlining scheduling, and automatic payments.”<sup>34</sup> Through Fons, clients can easily create appointments, with automated reminders for the students.

My Music Staff is another online billing, scheduling, and branding software. It differs from Fons in its website builder and SEO management, providing teachers with easy, built-in ways to dive into marketing. My Music Staff allows students to log in through the teacher’s

<sup>34</sup> Eric Branner, “Fons Demo- an in-Depth Look at Features ,” YouTube, July 28, 2020, <https://www.youtube.com/watch?v=msNlKpKDbgI>.



website, and also can be used with payment processors like Paypal. My Music Staff will send automated reminders to students.<sup>35</sup>

Platforms like Wave Accounting are other viable options for bookkeeping. Wave Accounting is a free resource, but limited strictly to the finance realm. The other more encompassing programs like Fons and My Music Staff may be a better option for teachers that want everything in one place.

### 2c. Social Media

Social media is increasingly taking over lives as the primary means of connecting with friends, acquaintances, and strangers. For businesses, a social media presence is more and more crucial to being discovered by potential clients. For a small private studio, a social media presence may be more crucial to exposure than it would be to a large corporation, as it can be a helpful tool to gain students and communicate with current students and parents.

The most obvious social media platform that a teacher should consider is Facebook, given its pervasive presence. Created in 2004 for connecting university students, the platform has grown to almost three billion monthly users.<sup>36</sup> By creating a free account, teachers can post links to their website, videos of their students, and create groups for their studio. Joining community Facebook groups to connect with young parents is a particularly helpful strategy when using Facebook for marketing.<sup>37</sup>

---

<sup>35</sup> “The #1 Music Teacher Software - Music Studio Management Software.” My Music Staff, November 11, 2020. <https://www.mymusicstaff.com/>.

<sup>36</sup> <https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>

<sup>37</sup> <https://www.teachpianotoday.com/2019/04/17/a-piano-teachers-guide-to-filling-your-piano-studio-with-facebook/>



*Fig. 9: An example Facebook post by Daniel Patterson.<sup>38</sup>*

Posting pictures of students with books, playing duets, or in recitals, with parents' expressed permission, can be a good way to foster engagement on your Facebook profile, according to Daniel Patterson.<sup>39</sup> Patterson says that because people are self-focused, the secret to getting a good presence on Facebook is by catering to their needs, e.g., posting cute pictures of their children learning piano.

<sup>38</sup> Daniel Patterson, "The Piano Teacher's Ultimate Facebook Guide," 18.

<sup>39</sup> Daniel Patterson, "The Piano Teacher's Ultimate Facebook Guide," Grow Your Music Studio, 2016, <https://www.growyourmusicstudio.com/guide/fb-guide-growyourmusicstudio.pdf>.

Dr. Hardin notes that in the early stage of Covid-19 lockdowns, piano teachers in his community joined Facebook groups specifically about technology in online teaching for guidance. One practical step that piano teacher Mellissa Weinert uses to grow her studio is



*Fig. 10: Screenshot from a popular TikTok video by Matthew Johnson, founder of Elite Singer, reacting to a performance of “Living on a Prayer” by Bon Jovi. .*

through marketing to homeschooling groups across the country: gaining homeschoolers gives access to more flexible hours, rather than teaching only during after-school hours.

Since Facebook has such a ubiquitous presence, its usage is the main focus of this section; however, many other platforms can be used for promoting private lessons. Using

Instagram, the photo-based platform owned by Facebook, is a good way to reach a younger audience, as is Snapchat and TikTok. TikTok and YouTube especially are good platforms for teachers who create a lot of video content, and lucky musicians have found their content going viral on these platforms. Matthew Johnson, founder of the Elite Singer on TikTok, says “I learned that the app is so great at boosting content for content’s sake, not based on the followers you have...within a week I got five thousand followers. Starting from scratch, you can build a huge following, which is so beneficial for businesses.”<sup>40</sup> Regardless of the platform teachers choose to use for their social media presence, creating quality content will help clients be attracted to your studio.

Administration and marketing are crucial to the visibility and growth of a teacher’s studio. Sticky ideas can be promoted through social media, with the chance of even becoming a viral sensation. Websites are crucial to any studio, regardless of social media presence, and using automated systems for billing and scheduling frees up time to take on more students. Facebook, YouTube, Instagram, and TikTok are all ways that teachers can be discovered by potential clients, especially with 81% of U.S. adults saying that they use YouTube and 69% saying that they use Facebook, according to a 2021 Pew Research Center survey.<sup>41</sup> Understanding how to use these platforms to your advantage is one step towards becoming a successful piano teacher.

#### Conclusion: Why Online Education is Here to Stay

Development of technology is constantly churning forward. 2020 brought a new world of technological developments, like the refinement of video conferencing platforms and the emergence of the immensely popular TikTok. Because the race to new development doesn’t stop,

---

<sup>40</sup> Carly Walton, “Use TikTok to Fill Your Empty Studio Spots!,” Teach Music Online (Teach Music Online, October 4, 2021), <https://www.teachmusic.online/blog/use-tiktok-to-fill-empty-studio>.

<sup>41</sup> Brooke Auxier and Monica Anderson, “Social Media Use in 2021,” Pew Research Center: Internet, Science & Tech (Pew Research Center, April 9, 2021), <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>.

it is hard to predict how the online landscape will change in the next ten years. Even now, the recent announcement of Facebook's Metaverse could lead to an entirely new way of interacting in a virtual space,<sup>42</sup> and as a result cause many of the concepts in this document to become outdated in a few short years.

There is no question, however, that the online education field will continue in its development. Pioneers of online piano teaching like Dr. Casarotti and Carly Walton are useful figures to follow to stay up-to-date on developments in the field. The future of online teaching seems bright, but there are foreseeable issues in full-time online education. Mr. Briggs speculates that an arising problem for online educators is the possibility of burnout and overworking themselves. "I think it allows flexibility for students," he said in a September 2021 interview,

"But I think administrations are going to have to seriously reconsider how we format teaching contracts... There has to be serious thought as to how teachers load is considered. Teaching is going to become like a stockbroker's job, that happens 24 hours a day, and there has to be some serious looks as to how to support the educator to make sure they don't overwork themselves. This changeover happens from being a three months and three months thing, to a twelve month out of the year thing. I don't know how much of that is happening."

Online teaching is becoming a more popular way to reach students, but it is not for everyone. Weighing the pros and cons of online teaching is important for deciding whether or not it is the right fit. Choosing the right video conferencing platform and starting with the right equipment will help create a better student experience. Using Malcom Gladwell's principles of

---

<sup>42</sup> "Metaverse-How Will It Disrupt Our Daily Lives ?," Medium, November 30, 2021, <https://medium.com/metaverse-and-how-it-is-going-to-change-the-world/metaverse-how-will-it-disrupt-our-daily-lives-395ff4201370>.

marketing and the Heath brothers' stickiness ideas for social media marketing will help grow your studio. Finding a mix of technology and traditional lessons will help the teacher grow in their abilities and income, and will help the student stay connected in an increasingly digitized world.

## Appendix A:

### SimplyPiano: An App Review

While discussing the pros and cons of teaching online versus in-person, some may bring up the question of smartphone applications that replicate the structure of a formal music lesson. Developers of these apps will argue that the physical teacher is no longer necessary - that recorded lessons and AI-graded exercises can replace the teacher with less cost. One of these apps is SimplyPiano by JoyTunes, and to argue that these apps are more useful when added as a supplement to the flesh and blood teacher, not a replacement, I have included my in-depth analysis of the usability of the app.

SimplyPiano is the top choice for self-learning piano apps on the Apple Store, and it's easy to see why: an attractive and easy-to-navigate interface, bite-sized lessons that contain very popular songs, and all for free for the first few weeks. I downloaded the app and completed a few levels of introductory lessons to see what the shortcomings were and how it could be used by piano teachers. Ultimately the app works well enough, but only as a supplement for real-time teaching.

The app contains several starter questions when setting up an account. The first is "Do you have any experience?" For the purposes of reviewing the app, I chose the "absolute beginner" option. The app then asks "What are your top piano goals?" and gives a variety of options such as learning piano as a new hobby, reading sheet music, and playing chords.

From there, the app takes a student to the first level, and the first set of lessons within the level. There is a short instructional video showing the student how to find middle C. The video says simply to "find the group of two white keys in the middle of your piano. Go one note over.

This is middle C.” This is not enough instruction for how to find middle C for most students, especially younger students.

The video is followed by a series of exercises that use the microphone in a student’s phone to pick up the notes on the piano, much like a tuner. However, the app is indiscriminate when it comes to piano sounds or voices; should a family member be talking in the background, the app may register it as wrong notes.

The exercises on this video had students play middle C three times, and then the neighboring D three times. The app will not allow moving to the next note until the previous one is played correctly, which makes it impossible to cheat. Ten more exercises of this nature follow. The notes are displayed on the treble clef, and there is a keyboard on the screen highlighting the correct notes for reference. The notes are quarter notes, but the app never explains quarter notes or measures, or even defines the treble clef and staff. This is a first major downside of SimplyPiano: in the formative lessons, they provide no rhythmic or reading instruction.

The end of each set of exercises is a small piece that automatically starts with a few bars of accompaniment. Exercise 8/10 played an accompaniment track to “Blue Danube Waltz” while highlighting C and D to play during the song. The staff tracks along as the accompaniment plays, moving at an extremely fast pace for a first lesson. I found it difficult to keep up with what was going on. The accompaniment was at about 132 to a quarter note, which is not feasible for a student trying to read on the staff for the first time. It is also of value to note that the staff displayed quarter note rests and whole note rests, again without explaining them.

The second lesson introduces finger numbers. The instructional video tells students to use their thumb on middle C. The third lesson moves to playing E with finger 3. One of the exercises for this lesson is less than helpful, as the accompaniment doesn’t match up with the notation. The



solo section starts on the downbeat of the measure while the accompaniment is clearly a beat ahead.

The next section addresses proper posture. “It’s important to sit tall and let your hands hang loosely from your shoulders,” the video begins, showing a man sitting at his piano straightening his back. “Set the height of your bench so that your elbows are slightly higher than the keyboard. Make sure that your fingers are round. This will help your technique later on.” This is a red flag as students may develop unhealthy habits due to the lack of technical instruction on relaxed wrists and curved fingers, especially since many students start out with a major downward dip in their wrists and with stiff, unbending fingers.

These few lessons are the general format for the rest of the course; 10-second lessons followed by ten exercises that practice the skill explained in the video. The fast-paced nature of the course does not allow for a nuanced explanation of a difficult topic, such as posture and hand position. A completely different format would be necessary for this app to work well for serious learning: one that provides more time with video instruction or some type of hybrid, interactive learning option. As there is no technical instruction, the only thing accomplished with SimplyPiano is developing the ability to identify notes on the keyboard and staff. As a teacher, I would discourage students from buying the premium version and instead use the \$119.99 to get a few real-life lessons.

Overall, the app is attractive and easy to use. It is functional and not glitchy like other free and subscription-based resources can be. It creates a fast-past learning environment that uses popular songs to help students engage more effectively, while also introducing them to classical music. The lessons allow for a reasonable amount of learning when a student otherwise might not have the opportunity to learn. The app could be used by teachers as extra practice for

sight-reading and note-identification. As long as the teacher spends adequate time in the lessons discussing topics such as rhythm and technique in the lesson, the app provides a helpful aid that may motivate students to practice when they otherwise may not.

Apps such as SimplyPiano are helpful tools that will enhance the student's experience while allowing the private instructor to stay in business. They shouldn't be used as a substitute for live teaching. As noted with SimplyPiano, instruction on technique is limited. A beginner student can develop many bad habits from no instruction on technique. Future apps may find ways to implement all aspects of music education, but for now, it is safe to say that even the person with the least amount of understanding of music will intuitively know that private instructors are more valuable than learning via smartphone app.

## Appendix B:

## An Evaluative Chart for Beginner Piano Method Books

	Faber Primer Level	Piano Safari First Level	Alfred Level 1A
<b>Basic Layout</b>			
Is the book sectioned into easily-achievable lessons?	Each page or two is a new concept. Compiling the lesson book, technique and artistry book, theory book, and others based on the teacher guide provides plenty of achievable material for each lesson.	How much the student will accomplish in each lesson is up to the teacher. The book isn't really separated into lessons, but the online teacher's guide provides a sample lesson plan.	As with Faber, every few pages introduce a new concept. Compiling the lesson book, recital book, theory book, and others based on the teacher guide provides plenty of achievable material for each lesson.
Are there multiple books addressing specific aspects of learning music, such as technique and theory?	Yes, the Primer level contains three necessary books, the Lesson Book, Theory Book, Technique and Artistry Book, as well as supplemental material such as the Performance Book, Sightreading Book, etc.	The First Level contains a Repertoire Book with audio tracks so the student can listen to the pieces, Sight Reading and Rhythm Cards, and a Theory Book.	There are many books for each level of the Alfred series, but the necessary ones are the Lesson Book, Theory Book, and Recital Book.
Is this book meant to be paired with professional instruction, or is it for self-learning?	The Primer level is meant to be taught by a teacher.	This is meant for a teacher especially since it is mostly learning by rote and improvisational exercises.	Level 1A is meant to be taught by a teacher.
What is the age range for each level?	The Primer Level is meant for children 7-11 years old.	The age range isn't specified by the authors, but it seems meant for elementary school-age children.	The age range isn't specified by the authors, but it seems meant for elementary school-age children.
How long should it take for the student to complete the level?	The time taken for the completion of the Primer level depends on the student and their motivation.	Most students take a full year, or at least an academic year, to complete the First Level.	It depends on the age and maturity of the student, but it may take anywhere from three months to a year to complete the level.

<b>Teacher Instruction</b>			
Does it contain instructions to the teacher or a separate teacher's book?	There are notes for the teacher in all of the books, and a separate guide for the teacher.	There are a few pages of notes for the teacher at the beginning of the book, as well as teacher resources on the Piano Safari website.	There is a companion teacher guide to the lesson book that contains detailed instructions of each page.
Are the instructions clear and concise?	The instructions, especially with the teacher's guide, are very clear.	Yes, but the instructions are too brief. It may be difficult to use the books without the extra teacher resources.	The instructions are clear and well-written. Each page contains points the teacher should highlight for the students.
Are there pages that the teacher can assign the student as homework?	The theory book contains pages for the student to complete during the week.	Yes, there are worksheets in the theory book, but they might take more explaining to the student than the Faber books.	The theory book and supplemental books contain pages the student can complete throughout the week.
Are there additional resources, such as instructional videos linked to each page, that the teacher can access?	Yes, with the subscription to the Piano Adventures Teacher Altas, the teacher can access an example video of how to teach each lesson.	There are downloadable teacher guides and extra resources on the Piano Safari website.	There are many online Alfred books and software options available, but each are considerably more expensive than Faber's online options.
<b>Musical Development</b>			
What is the method for teaching the student to read music?	Pre-staff notation with note names, focusing especially on C-G in both hands and F-C in the left hand.	The book introduces the landmark notes of treble C and bass G on the staff about halfway through the book. From there, the book focuses on teaching the student intervals.	Alfred introduces black keys, and then quickly introduces all of the white keys. Most of the songs place both hands in the five-finger C-G pattern.
How long does the book spend in pre-staff notation?	The Primer Level spends about half of the Lesson Book on pre-staff notation.	The First Level spends the first two units on pre-staff notation, though some of the songs for the student to learn by rote are written in regular notation.	Level 1A spends about half of the Lesson Book on pre-staff notation.

How much of the book is expected to be learned by rote?	It depends on the learning style of the student, but most of the Primer Level is not for learning by rote.	Most of the book is meant for the teacher to teach the student by rote.	Most of Level 1A is not meant for learning by rote, but there is a supplemental ear training book.
Does the book teach the student how to practice?	There are practice notes before some of the pieces, but the books could include more detail on how to practice the material.	No.	No, but there are some instructions for the student when learning a new piece.
<b>Technical Development</b>			
Does the book contain instruction on hand position and posture?	Yes, Unit 1 provides graphic and written instruction on posture and hand position.	Yes, the repertoire book provides two pages of technique.	Level 1A Lesson Book provides a page on how to sit at the piano, but it isn't as detailed as the Faber series.
Does the book explain finger numbers?	The beginning of the Lesson Book spends a good amount of time on finger numbers and related exercises.	Yes, the book features finger numbers, but not in as much detail as Faber.	The Lesson Book features one page on finger numbers.
Does the book promote strong, curved fingers with technical exercises?	Yes, several exercises ("The Pecking Rooster") deal with keeping the fingers curved.	There aren't any exercises that specifically deal with keeping curved fingers.	There aren't any exercises that specifically deal with keeping curved fingers.
How much of the keyboard does the book use?	The book mainly focuses from bass C to treble C, but some songs go all the way up and down the keyboard.	There is a very wide range for the pieces.	The books mainly stay within bass C to treble C.
<b>Repertoire</b>			
Is the music engaging and exciting for the student?	This depends on the temperament and interests of the students, but the bright colors and entertaining illustrations will probably captivate the attention of most students.	The illustrations of animals and the animal-based songs are fun for younger students. Learning more difficult-sounding pieces by rote will help keep the interest of students.	The music is exciting for the students, and the illustrations are captivating and interesting for students of any age.

Is the music easy for the student to read and understand on their own time?	Assuming the student is already a strong reader, the instructions on most pages are easy to understand.	No, most of the music is meant to be learned by rote, so the music would be very difficult for the student to understand on their own time.	Assuming the student is already a strong reader, the instructions on most pages are easy to understand.
Does the repertoire have lyrics, and if so, are the lyrics interesting for children?	The lyrics are geared towards children and are fun ways to think about the concepts being introduced. (For example, "I Hear an Echo", Lesson Book page 20, deals with dynamic markings in a memorable way)	Some of the pieces have lyrics. The lyrics are mostly about animals, and have almost a nursery rhyme quality to them, making them easy to remember.	There are lyrics to most of the songs, but most of the lyrics are clunky and not as memorable as the lyrics for Piano Safari.
Is the repertoire relevant and updated to the student or out of date?	The repertoire in the PreTime Piano Popular book and PreTime Piano Hymn book could especially use an update, as students increasingly have not seen some of the older movies referenced (for example, many children have not seen the Wizard of Oz)	There aren't any popular pieces, so this doesn't really apply.	There aren't any popular pieces, so this doesn't really apply.
Are the pieces meant to be played for one week, or to spend longer?	It depends on the student's motivation, but ideally a week or so would be enough to grasp the concept of the piece.	Most of the longer pieces are meant to be spent at least a few weeks on. It depends on the motivation of the student.	It depends on the student's motivation, but ideally a week or so would be enough to grasp the concept of the piece.
If there are multiple books, how many pieces are to be learned at once?	A few pieces at a time is probably ideal for most students: a current and new piece from the Lesson Book, a Theory Page, a page from the Performance Book, and a fun piece is probably more than enough work for a student.	According to the lesson plan provided, the student might learn two new pieces by rote, as well as work on some rhythm and improvisational exercises in the lesson. Remembering the two pieces by rote may or may not be enough for	The pieces in the recital book and pages in the theory book coordinate with pages in the lesson book, which are to be learned simultaneously. Ideally, the student would be working on several pieces at a time.

		the week.	
<b>Theory</b>			
How is theory woven into the lesson?	There is a separate theory book, but many of the concepts are also included in the lesson book.	The concepts in the theory book and repertoire book go together, such as teaching the student to recognize intervals.	The theory book coordinates with the lesson book, so the concepts worked on in the lesson will be reinforced when the student completes the theory assignment during the week.
Are there worksheets for the student to complete on their own time?	Yes, the teacher can assign a page or two for the student to complete on their own time.	There aren't worksheets for the student to complete apart from the teacher in the books.	Yes, there are coordinating theory pages to the pieces the student learns.
Are the instructions for this worksheet easy for the student to understand?	The theory worksheets are clearly worded.	The teacher should explain the instructions for the theory homework clearly.	If the pages are assigned after the teacher goes over the coordinating lesson book pages, then the assignment should be easy for the student to understand.
<b>Accessibility and additional resources (Applicable especially to younger students)</b>			
Are the books accessible to the intended age range?	Yes, most students age 7-11 should be able to understand the content.	It depends on the skill of the teacher, but the topics introduced to the student should be very accessible, especially when learning by rote.	It depends on the student, but most should be able to grasp the concepts introduced in Level 1A.
Do the books foster a love for learning through a fun layout?	The books encourage interactivity and critical thinking with the material and music, especially in the fun practice steps before each piece.	Yes, the books encourage playing and memorizing more difficult pieces than the student would otherwise play through learning by rote.	Yes, the books foster a fun experience with learning music, provided it is taught correctly.
Are the books colorful and appealing to younger students?	Yes, the books contain many bright colors and fun illustrations and	The books aren't colorful, but they do have fun illustrations.	The books are very colorful and contain fun illustrations.

	notes.		
If the books are meant for children younger than reading age, how is it meant to be used?	Not applicable, as the targeted age range should already be reading.	Since the learning is mostly done by rote, the student doesn't need to be able to read; however, some of the content might not be easily grasped by students younger than reading age.	Not applicable, as the targeted age range should already be reading.
Is the book accessible for disabled or special-needs children?	This curriculum may or may not be an appropriate fit, depending on the needs of the child.	This curriculum may or may not be an appropriate fit, depending on the needs of the child.	This curriculum may or may not be an appropriate fit, depending on the needs of the child.
Can the book be accessed online?	The Faber Piano Adventures Teacher Atlas is available to teachers online.	The book isn't available online, but resources such as supplemental pieces and the accompaniment tracks are.	The books aren't available online as official Alfred resources, but the website does have some supplemental books.
If yes, how accessible and updated is the website?	The website is very easy to navigate.	The website is very easy to navigate.	The website is clean-looking but its interface is difficult to navigate.
Can the music be printed, or is it meant to be viewed online?	The music is meant to be viewed, not printed. This is a downside to teachers who wish to write on their music who don't own a tablet.	Not applicable	Not applicable
What kind of technology is needed to best view the online resources?	The Piano Adventures Digital Library is best viewed either on a computer screen, as in a virtual lesson, or on an iPad placed on the music stand. The mobile site is more difficult to use, but it can be done.	The extra sheet music is probably best printed out, but the teacher may be able to use a computer screen or iPad for virtual music.	The extra software and online pdfs are probably best viewed online, on a computer screen or iPad.
Is there an app for the library? Does this app contain games and	There is a Faber Piano Adventures Player mobile phone app that	There isn't an app for this method.	There isn't an app for this method.



resources that interact with the lesson books?	provides MIDI accompaniment and the score to some of the songs out of the books for free. It allows the student to speed up or slow down the accompaniment according to their needs. There is also a Sightreading Coach for Faber Piano Adventures that requires a separate account from the Digital Library.		
Do the online resources contain accompaniment tracks, and are these accompaniment tracks easy for the student to play and follow along with?	Yes, the tracks are easy to follow along with and provide a fun substitute to the teacher duets included in the book. However, only some of the songs in the Primer Level have accompaniment. Most notably, all of the extra materials don't have any sort of accompaniment, which may be disappointing for the student wanting accompaniment to their Disney song.	Yes, the online resources contain tracks accessible by code in the book. Listening to the tracks is especially important in this methodology.	No, there are no online accompaniment tracks.
Are additional repertoire books available for purchase, such as arrangements of pop songs, Disney songs, or other fun resources?	Yes, Faber has a plethora of helpful resources and supplemental material.	There aren't as many extra resources as in Faber, and most of them are not songs the student would recognize.	There are many additional books for each level, but most aren't available online.
Are there online videos or DVDs that go with the books?	There are online teaching videos for the teacher's reference.	There are online videos for each of the songs in the book.	No.

	John Thompson's Easiest Piano Course, Part 1	Leonard Student Piano Library, Book 1	
<b>Basic Layout</b>			
Is the book sectioned into easily-achievable lessons?	No, it's up to the teacher to decide how many pages to use per lesson.	Yes, there are new concepts every few pages. Compiling the suggested pages in all of the books will be more than enough material for each lesson, as laid out into modules in the appendix of the Teacher's book.	
Are there multiple books addressing specific aspects of learning music, such as technique and theory?	There is only one book per level that includes theory worksheets.	Yes, Book 1 has several necessary components, including the Piano Lessons Book, the Piano Practice Games book, Piano Theory Workbook, and Piano Solos book. There is also supplemental material, such as the Piano Technique book.	
Is this book meant to be paired with professional instruction, or is it for self-learning?	The books are meant to be taught by a teacher.	Book 1 is meant to be taught by a teacher.	
What is the age range for each level?	It isn't specified, but "Teaching Little Fingers to Play" is for young beginners and the Easiest Piano Course is for everyone else.	Book 1 isn't specified, but is probably meant for elementary-school-age children.	
How long should it take for the student to complete the level?	The time taken for the completion of each level depends on the student and their motivation.	The time taken per book isn't specified, but depends on the student and their motivation.	
<b>Teacher Instruction</b>			

Does it contain instructions to the teacher or a separate teacher's book?	There isn't a separate teacher's guide or really any instruction in the book for the teacher.	There is a very helpful separate teacher's guide.	
Are the instructions clear and concise?	Not applicable	The teacher's guide is very detailed and explains each page clearly and concisely.	
Are there pages that the teacher can assign the student as homework?	There are a few worksheets scattered throughout the book.	Yes, there are worksheets in the theory book. They are very similar to the Faber theory worksheets.	
Are there additional resources, such as instructional videos linked to each page, that the teacher can access?	No.	There is additional material, including accompaniment tracks, but it isn't linked to the physical book.	
<b>Musical Development</b>			
What is the method for teaching the student to read music?	The book jumps immediately into the grand staff. There is no pre-staff notation.	Pre-staff notation with note names, and then focusing on C-E in the right hand and F-C in the left hand.	
How long does the book spend in pre-staff notation?	None.	Book 1 spends about two-thirds of the book on pre-staff notation.	
How much of the book is expected to be learned by rote?	Much of Teaching Little Fingers to play is meant to be learned by rote, but the other levels are not.	Most of the book is not meant for learning by rote.	
Does the book teach the student how to practice?	No.	Yes, The Piano Practice Games book provides an entire book on "imaginative ways to learn and memorize each piece faster".	
<b>Technical Development</b>			

Does the book contain instruction on hand position and posture?	No, there is no instruction on hand position and posture.	The first page of the Lesson Book contains instructions on hand position and posture, but is not as in-depth as the Faber series.	
Does the book explain finger numbers?	The finger numbers are briefly explained on page 7.	Yes, but the finger numbers, especially for the pre-staff notation, are not as clearly marked as in other method books.	
Does the book promote strong, curved fingers with technical exercises?	No, the book has very little technical instruction.	No, the book has very little technical instruction.	
How much of the keyboard does the book use?	Five notes up and down from middle C.	The book almost exclusively uses bass F to treble G.	
<b>Repertoire</b>			
Is the music engaging and exciting for the student?	The newest versions of the John Thompson books are more colorful than others, and contain interesting illustrations, but it depends on the student.	The book feels dated, and students might find the illustrations a little bit boring compared to other method books.	
Is the music easy for the student to read and understand on their own time?	No, the teacher must explain all of the pages before the student can work on them.	Some of the songs may be easy for students to learn by themselves.	
Does the repertoire have lyrics, and if so, are the lyrics interesting for children?	For the most part, the examples don't have lyrics. Some of the lyrics might even be considered offensive today, for example, "the Old Cotton Picker".	The lyrics are very simplistic, and often don't relate to the concept being learned.	
Is the repertoire relevant and updated to the student or out of date?	The repertoire feels dated and out of touch, as mentioned before.	The Hal Leonard Student Piano Library-specific books feel dated, but plenty of unaffiliated, popular	

		easy piano resources are available on the Hal Leonard website.	
Are the pieces meant to be played for one week, or to spend longer?	It depends on the student's motivation and age, but ideally a week or so would be enough to grasp the concept of the piece.	It depends on the student's motivation, but ideally a week or so would be enough to grasp the concept of the piece.	
If there are multiple books, how many pieces are to be learned at once?	Not applicable	Each module contains between 3-8 pages of the books for the student to work on during the week. Younger students may complete only one module per week, while older students may complete two modules a week, meaning working on a range of pieces.	
<b>Theory</b>			
How is theory woven into the lesson?	There isn't a separate theory book, but some concepts are introduced throughout the book.	The concepts in the lesson book and theory book go together, so the teacher can spend a few minutes working through the theory book with the student each week.	
Are there worksheets for the student to complete on their own time?	There are very few worksheets for the student to complete on their own time.	Yes, there are coordinating theory pages to the pieces the student learns.	
Are the instructions for this worksheet easy for the student to understand?	The theory worksheets are clearly worded, but the teacher might need to explain it beforehand.	The theory worksheets are clearly worded.	
<b>Accessibility and additional resources (Applicable especially to younger students)</b>			

Are the books accessible to the intended age range?	It depends. It might be difficult for younger elementary students to understand.	Yes, most older-elementary students should be able to understand the content.	
Do the books foster a love for learning through a fun layout?	As with the Hal Leonard Student Piano Library books, the John Thompson books feel dated. It depends on the personality and interests of the student, but this course is not for everyone.	As mentioned before, the books feel dated. It may depend on the personality and interest of the student, but many younger students especially may not be as attracted to the dated format and sparse pages.	
Are the books colorful and appealing to younger students?	The books are colorful, but the sparse layout makes them less appealing than other method books.	They are colorful but the illustrations are less appealing than other method books.	
If the books are meant for children younger than reading age, how is it meant to be used?	Not applicable, as the targeted age range should already be reading.	Not applicable, as the targeted age range should already be reading.	
Is the book accessible for disabled or special-needs children?	This curriculum probably will not be accessible for disabled or special-needs children.	This curriculum may or may not be an appropriate fit, depending on the needs of the child.	
Can the book be accessed online?	No.	The book isn't available online, but with the purchase of the book the student also gets access to the online resources, including accompaniment tracks.	
If yes, how accessible and updated is the website?	No applicable.	The Hal Leonard website is rather difficult to navigate, especially when trying to find their Student Piano Library resources.	
What kind of	Not applicable	Not applicable	

technology is needed to best view the online resources?			
Is there an app for the library? Does this app contain games and resources that interact with the lesson books?	There isn't an app for this method.	There isn't an app for this method.	
Do the online resources contain accompaniment tracks, and are these accompaniment tracks easy for the student to play and follow along with?	Not applicable.	There are online accompaniment tracks with the book. The student or teacher only has access once they purchase the book.	
Are additional repertoire books available for purchase, such as arrangements of pop songs, Disney songs, or other fun resources?	No, there are no additional repertoire books in the John Thompson method.	Yes, through Hal Leonard there are many extra resources, but they are not specific to the Student Piano Library.	
Are there online videos or DVDs that go with the books?	No, there aren't additional videos or DVDS.	There are online videos for each of the songs in the book.	

## Works Cited

- “The #1 Music Teacher Software - Music Studio Management Software.” My Music Staff, November 11, 2020. <https://www.mymusicstaff.com/>.
- Ajero, Mario. “Mario Ajero.” YouTube. YouTube, 2021. <https://www.youtube.com/user/mariocast>.
- Auxier, Brooke, and Monica Anderson. “Social Media Use in 2021.” Pew Research Center: Internet, Science & Tech. Pew Research Center, April 9, 2021. <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>.
- Baumgard, Landon. “Getting Started with the Teacher Atlas.” Faber Piano Adventures. Hal Leonard, July 15, 2021. <https://pianoadventures.com/events/getting-started-with-the-teacher-atlas/>.
- Bellelo, Rebecca. “Keeping a Studio Running Effectively.” Piano Magazine 12, no. 2, 2020.
- Bolatov, Aidos K., Telman Z. Seisembekov, Altynay Zh. Askarova, Raushan K. Baikanova, Dariga S. Smailova, and Elisa Fabbro. “Online-Learning Due to COVID-19 Improved Mental Health among Medical Students.” *Medical Science Educator* 31, no. 1 (2020): 183–92. <https://doi.org/10.1007/s40670-020-01165-y>.
- Branner, Eric. “Fons Demo- an in-Depth Look at Features .” YouTube, July 28, 2020. <https://www.youtube.com/watch?v=msNlKpKDbgI>.
- Bughin, Jacques, and Jonathan Doogan. “A New Way to Measure Word-of-Mouth Marketing.” McKinsey & Company. McKinsey & Company, February 5, 2018. <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-new-way-to-measure-word-of-mouth-marketing>.



“Choose a Plan That's Right for You.” ManyCam. Visicom Media Inc., 2021.

<https://manycam.com/buy/#individuals>.

Cleanfeed, 2021. <https://cleanfeed.net/>.

de Looper, Christian, and Ben Blanchet. “Google Meet vs. Zoom: Here's How the Popular Video Conferencing Tools Stack Up.” Business Insider. Business Insider, July 8, 2021.

<https://www.businessinsider.com/guides/tech/google-meet-vs-zoom>.

Dontre, Alexander J. “The Influence of Technology on Academic Distraction: A Review.”

Human Behavior and Emerging Technologies 3, no. 3 (2020): 379–90.

<https://doi.org/10.1002/hbe2.229>.

Dumlavwalla, Diana. “Characteristics of Expert Teachers Using the Video-Conferencing Platform.” Piano Magazine 12, no. 2, 2020.

Gladwell, Malcolm. *The Tipping Point*. New York, New York: Little, Brown, and Company, 2000.

Heath, Chip, and Dan Heath. *Made to Stick: Why Some Ideas Survive and Others Die*. New York, New York: Random House, 2010.

Ivanova, Lora. “FaceTime vs Skype: The Ultimate Video Calling App Battle.” BROSIX, September 26, 2021. <https://www.brosix.com/blog/facetime-vs-skype/>.

Kealey, Melanie. “Website Design Inspiration: Best Piano Teacher Websites.” Bandzoogel Blog. Bandzoogel, July 23, 2020.

<https://bandzoogel.com/blog/website-design-inspiration-best-piano-teacher-websites>.

Khalili, Joel. “What Is Microsoft Teams? How It Works, Tips and Tricks, and Best Features.” TechRadar. TechRadar pro, November 5, 2021.

<https://www.techradar.com/news/what-is-microsoft-teams-how-it-works-tips-and-tricks-and-best-alternatives>.

Kraft, Matthew A., and Nicole S. Simon. "Teachers' Experiences Working from Home during the COVID-19 Pandemic." UPBEAT. Teach Upbeat, 2020.

[https://f.hubspotusercontent20.net/hubfs/2914128/Upbeat%20Memo\\_Teaching\\_From\\_Home\\_Survey\\_June\\_24\\_2020.pdf](https://f.hubspotusercontent20.net/hubfs/2914128/Upbeat%20Memo_Teaching_From_Home_Survey_June_24_2020.pdf).

"Logitech C920s Pro Full HD Webcam with Privacy Shutter." with Privacy Shutter, 2021.

<https://www.logitech.com/en-us/products/webcams/c920s-pro-hd-webcam.960-001257.html>.

"Main Page." IMSLP. MediaWiki, 2021. [https://imslp.org/wiki/Main\\_Page](https://imslp.org/wiki/Main_Page).

"Metaverse-How Will It Disrupt Our Daily Lives?" Medium, November 30, 2021.

<https://medium.com/metaverse-and-how-it-is-going-to-change-the-world/metaverse-how-will-it-disrupt-our-daily-lives-395ff4201370>.

Muñoz, Christina. "Mental Health Implications of Virtual Learning on Student Engagement."

IDRA, August 30, 2021.

<https://www.idra.org/resource-center/mental-health-implications-of-virtual-learning-on-student-engagement/>.

Patterson, Daniel. "The Piano Teacher's Ultimate Facebook Guide." Grow Your Music Studio,

2016. <https://www.growyourmusicstudio.com/guide/fb-guide-growyourmusicstudio.pdf>.

"Piano Adventures Teacher Atlas." Faber Piano Adventures Digital Cloud. Hal Leonard, 2021.

<https://cloud.pianoadventures.com/products/teacher-atlas/>.

“Facebook MAU Worldwide 2021.” Statista, November 1, 2021.

<https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>.

Ramachandran, Vignesh. “Four Causes for 'Zoom Fatigue' and Their Solutions.” Stanford News. Stanford University , March 1, 2021.

<https://news.stanford.edu/2021/02/23/four-causes-zoom-fatigue-solutions/>.

Ross, Valerie. “Tonara Review: Six Weeks In.” Music Con Brio Piano Lessons. Music Con Brio Piano Lessons, October 9, 2020.

<https://www.musicconbriopiano.com/piano-lesson-blog/tonara-review-six-weeks-in.>

Sproule, Giselle. “Piano Marvel Review: Best Platform to Learn Classical Piano?” PianoDreamers.com, December 18, 2020.

<https://www.pianodreamers.com/piano-marvel-review/>.

Trevor. “How to Use Facebook Groups to Grow Your Piano Studio (Fast!).” Teach Piano Today, April 5, 2021.

<https://www.teachpianotoday.com/2019/04/17/a-piano-teachers-guide-to-filling-your-piano-studio-with-facebook/>.

“Video Conferencing, Web Conferencing, Webinars, Screen Sharing.” Zoom, December 8, 2021.

<https://explore.zoom.us/en/about/>.

Walton, Carly. “E51: Website Essentials for Recruiting Quality Students with Mellisa Weinert.” Spotify. Teach Music Online, August 16, 2021.

<https://open.spotify.com/episode/5tvGguaATv1iMxbqLAhcrN?si=0bttksmGQx6IvQCkjb2wcQ>.

Walton, Carly. "How I Became a Traveling Online Piano Teacher." Teach Music Online, 2021.

<https://www.teachmusic.online/about>.

Walton, Carly. "How to Attract Online Music Students." Teach Music Online. Teach Music Online, September 8, 2021.

<https://www.teachmusic.online/blog/how-to-find-quality-students-as-online-music-teacher>.

Walton, Carly. "Use TikTok to Fill Your Empty Studio Spots!" Teach Music Online. Teach Music Online, October 4, 2021.

<https://www.teachmusic.online/blog/use-tiktok-to-fill-empty-studio>.

"What Is a Wireless Network? - Wired vs Wireless." Cisco. Cisco, July 1, 2021.

<https://www.cisco.com/c/en/us/solutions/small-business/resource-center/networking/wireless-network.html#~introduction>.

White, Mica. "Schedule / Create an Appointment - How To." Fons Help Center. Fons, 2021.

<https://help.fons.com/en/articles/2059799-schedule-create-an-appointment-how-to>.